

Puppy Strangles

I want to alert you to a condition that may onset in puppies between the ages of two and four months. Because it is often misdiagnosed and because it has potentially fatal consequences, you may want to bring this information to your veterinarian's attention should your puppy present any of the typical symptoms:

The condition is variously referred to as **juvenile cellulitis**, **cellular dermatitis**, **juvenile pyoderma**, or **puppy strangles**. It has a number of symptoms, any and all of which may occur, and in varying order. Among them are the appearance of small, pimple-like bumps around the eyes, the muzzle, the abdomen, and other parts of the body. These mock the appearance of bacterial rashes, and may break open and weep a yellowish liquid and then crust over.

While many minor conditions may cause a belly rash on pups, the presence of pustules inside the ears is a real warning sign. They begin quite small and can eventually cover the inner surface of the ear with weeping pustules. The entire ear leather may also swell significantly.

Other signs include discharge from, swelling of, and hair loss around the eyes, swelling of the muzzle with attendant hair loss, and swollen lymph nodes in the throat and in the backs of the thighs. Be particularly concerned if rash-like areas are accompanied by swollen glands.

This is primarily an immune system disorder, and although it may look like a bacterial infection, it will not respond to antibiotic treatment alone. Other similar-appearing skin outbreaks, such as puppy impetigo, result from minor bacterial infections, and will ultimately disappear whether treated or not. This is not the case with cellulitis, although some veterinary dermatologists believe there may be a rod-like bacteria associated with the condition, similar to the one that causes cat scratch disease.

Essentially what is going on with the pups is that their immune systems are activated by normal development and environmental exposures but then overreact and start identifying the body's own tissues as agents to attack. The lymph glands swell since it is the lymphatic system that supplies and distributes the body's immune responses, and the pustules are actually filled with non-infected, sterile lymphatic fluid. You might think of the pup as having temporarily become allergic to himself.

The condition is evidently not an uncommon one and can occur in all breeds of dogs. It cannot be transmitted by contact from one littermate to another, or to anything or anyone else; and it can occur in one, a few, or all of the pups in a litter. The cause is not completely understood, but it does not seem to be a

genetic problem. It generally onsets in pups between the ages of two and four months, takes two to eight weeks to run its course, and if properly treated, leaves the pup with a completely healthy and functional immune system and no effect on future health or lifespan.

Because the immune system is running amok, so to speak, treatment consists of suppressing its action with corticosteroids, usually prednisone, with associated backup antibiotics in case of exposure to bacterial infection while the immune system is suppressed. Depending on the severity of the condition and the pup's response to treatment, the course of medication will run two to eight weeks. It is important to monitor the pup carefully once treatment has stopped. If the condition recurs, medication must be reinstated for a longer period. Eventually the immune system will sort itself out.

If the condition goes unidentified and untreated for some time, there may be rather extensive facial hair loss, which may result in some permanent adult scarring, but this is not the usual case. The other grave danger to the pup comes from the swelling of the lymph glands in the throat, which may actually enlarge to the point where they interfere with the pup's swallowing and breathing, thus the name puppy strangles.

While on steroid therapy you may notice an increased appetite, rather alarming weight gain, and a tendency to pant and to appear overheated and uncomfortable. These are all unfortunate but unavoidable side effects which must be endured if they occur; they will resolve once the steroids are no longer needed.

There is one possible complication from taking steroids at such an early age that may have serious adult consequences: It is thought that perhaps the steroids in some manner interfere with normal skeletal growth and development. Of particular concern are the hip joints. To counteract any such potential damage, it is now recommended that the pup take an oral glucosamine complex supplement throughout the course of steroid therapy. You can use Vetri-Science's Glyco-Flex, Vetri-Science's Multi Source Glucosamine, or commercially marketed human glucosamine complex in the same approximate proportions: In a product with a total content of 500 mg of glucosamine, there should be about 175 mg. each of glucosamine sulfate and glucosamine hydrochloride, and about 90-100 mg of n-acetyl glucosamine. Follow the recommended dosage for the pup's weight on the Vetri-Science products. For human products, give 500 mg. daily.

You can purchase the Vetri-Science products directly by mail order from KV Vet Supply, 3190 N Road, P. O. Box 245, David City, NE 68632. Telephone is 800-423-8211; fax is 800-269-0093; web site is www.kvvet.com. Phone hours are Mon-Fri

7AM-8PM CST. Sat 8AM-5PM. They have the best prices I have been able to locate, and their shipping is fast and reliable.

Another important situation to be aware of is that while the pup's immune system is being suppressed by the steroids, he will be unable to defend himself against any viral or parasitic disease that he encounters. The antibiotics will usually take care of any bacterial problems, but the pup is especially vulnerable to parvovirus and demodectic mange at this time, and you must exercise extreme care not to expose him to possible contaminated environments nor let him get overtired or overstressed with activities or concentrated training. This does not mean to put him into a plastic bubble, but use good common sense, and for management of parvovirus make sure you have a spray bottle of a 1:30 chlorine bleach to water mixture on hand at all times to decontaminate all new people and objects in the pup's environment. It would also be useful to spray the pads of the pup's feet with the bleach mixture anytime after he ventures into a public or semi-public area.

Unless your pup is actually taking steroids, you do not need to become alarmed or reduce his exposure in any way. If he does develop the condition, however, it will also mean that there is no point in giving any vaccinations while he is on steroids, and probably any vaccinations given prior to his developing the condition have been ineffective. Once he is over the cellulitis and has completed the course of steroids, consult with your vet or breeders for an appropriate vaccination schedule.

When the steroids have been discontinued, observe your pup's condition and behavior carefully. There may have been exposure to a bacteria that is not sensitive or is resistant to the particular supportive antibiotics that he has been taking. Symptoms of infection may have been masked by the steroids, and will become apparent once they are discontinued: I had an Irish Setter pup display septic arthritis from a streptococcus infection in both elbows and one knee following discontinuation of steroids: the antibiotic lincocin that she had been taking was not effective against this bacteria; the infection had been ongoing for some time in a masked state; and several weeks of ampicillin therapy were necessary to clear the infection and return the joints to normal.

If you should run into difficulties with your pup, or if your own veterinarian is unfamiliar with this often misdiagnosed condition, or if you are not satisfied with the pup's progress, you may have your vet contact mine. He is fully alerted to the situation and prepared to discuss treatment. Or you may wish to call him yourself or bring your pup to him for an exam and treatment. He is Dr. Robert Titchenal, Petaluma Veterinary Hospital, 2443 Petaluma Blvd. North, Petaluma; (707) 762-3511.

The current treatment recommended by Dr. Titchenal consists of prednisone and an antibiotic. Suitable antibiotics are Clavamox, Cephalexin or Clindamycin. For a pup in the 20-pound range, Dr. Titchenal suggests giving 15 mg. of prednisone twice daily for three days, then 10 mg twice daily for three days, then 10 mg once daily for three days, then 5 mg once daily for three days. Give 250 mg. of Cephalexin or 6.25 mg/lb. of Clavamox twice daily and 500 mg glucosamine complex throughout the course of prednisone. After these 12 days, discontinue the prednisone and antibiotics and see if symptoms recur. If they do, steroid and antibiotic therapy must be reinstated. Continue the glucosamine for at least two weeks after final prednisone use.